

Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A network modem device connecting a Local Area Network (LAN) to a remote network, comprising:

 a local store containing a list of domain or host names and attribute data wherein said list comprises;

 a list of domain names looked-up on an external Domain Name Service (DNS) with corresponding attribute data; and

 a list of host names declared on said LAN with corresponding attribute data; a DNS relay module; and

 a router having a LAN interface connected to said LAN, a local connection to said DNS relay module and a network connection to said remote network;

wherein said DNS relay module is configured to consult said list and said attribute data in an order influenced, at least in part, by result speed;

 wherein said DNS relay module uses said list and said attribute data to respond, without connecting to aid external DNS when resolving said domain name, to requests received from said LAN via said router on said local connection, for a numeric address in response to a domain name when said domain name requested is on said list; and

 wherein said DNS relay module generates a DNS request and transmits said DNS request to an external DNS on said remote network via said local connection to said router, and said DNS relay module returning a reply from said external DNS to said LAN via said local connection to said router to respond to request for a numeric address when said domain name requested is not on said list.

2. (original) A network modem device as claimed in Claim 1, wherein said attribute data is an IP address.

3. (original) A network modem device as claimed in Claim 1, wherein said attribute data identifies a domain or host name as a local station on said LAN and said DNS relay module, when said domain or host name is identified as a local station on said LAN, replies locally to said request.

4. (previously presented) A network modem device as claimed in Claim 1, wherein said remote network connection is a connection to at least one ISDN channel.

5. (original) A network modem device as claimed in Claim 4, wherein said router is connected to two ISDN channels: one for the intranet and one for the Internet.

6. (previously presented) A network modem device as claimed in Claim 3, wherein said DNS relay module listens to NetBIOS Over IP packets of information on said LAN, extracts local computer names and associated IP addresses from said packets and adds said computer names and associated IP addresses to said list of domain names.

7. (original) A network modem device as claimed in Claim 2, wherein said list is a list of domain names looked-up on the eternal DNS, and said DNS relay module automatically adds to said list of domain names looked-up on the external DNS, an entry corresponding to said reply from said external DNS.

8. (original) The device according to Claim 1, wherein said device is a digital network modem.

9. (original) The device according to Claim 8, wherein said device as an ISDN modem.

10. (canceled)

11. (original) The device according to Claim 1, wherein said external DNS is one of a group of external DNSs.

12. (original) The device as claimed in Claim 1, wherein said list of domain names and attribute data has an expiry date and time, and said DNS relay module comprises a mechanism for requesting from an external DNS a newly fetched numeric address for said domain name when a net request for said domain name will be received, for restoring said newly fetched numeric address as the attribute data for said domain name in said list and for refreshing said expiry date and time.

13. (currently amended) A method for relaying DNS requests on a LAN connected through a router to a remote network by a network modem device, comprising:

a Domain Name Service (DNS) relay module receiving a domain name request via said router having a LAN interface connected to said LAN, a local connection to said DNS relay module and a network connection to said remote network, on said local connection, for a numeric address in response to a domain name;

said DNS relay module consulting using a local store containing a list of domain or host names and attribute data, in an order influenced, at least in part, by result speed, to respond to said request, without connecting to said external DNS when accessing said domain name, when said domain name requested is on said list, wherein said list comprises:

a list of domain names looked-up on an external DNS with corresponding attribute data; and

a list of host names declared on said LAN with corresponding attribute data; and
said DNS relay module generating a DNS request and transmitting said DNS request to an external DNS on said remote network via said local connection to said router, and said DNS relay module returning a reply from said external DNS to said LAN via said local connection to said router to respond to said request for a numeric address when said domain name requested is not on said list.

14. (original) A method as claimed in Claim 13, wherein said attributed data identified a domain name as a domain name for device on said LAN.

15. (original) A method as claimed in Claim 13, wherein said generating comprises requesting a numeric address on said external DNS and responding to said request with a numeric address corresponding to said domain or host name.

16. (original) A method as claimed in Claim 13, wherein said attribute data is an IP address.

17. (original) A method as claimed in Claim 14, further comprising steps of listening to NetBIOS Over IP packets of information, extracting local computer names and IP addresses from said packets and adding said computer names and IP addresses to said list of domain names.

18. (original) A method as claimed in Claim 17, wherein said list of computer names declared on the LAN is automatically built using packets of information sent by stations on said LAN using NetBIOS Over IP protocol in which said station name and IP address is available.

19. (original) A method as claimed in Claim 13, further comprising a step of automatically adding to said list of domain names looked-up on the external DNS, an entry corresponding to said reply from said external DNS and wherein said list is a list of domain names looked-up on the external DNS.

20. (canceled)

21. (original) A method as claimed in Claim 13, wherein said external DNS is one of a group of external DNSs.

22. (original) A method as claimed in Claim 13, wherein said list of domain names and attribute data has an expiry date and time and said method further comprises the steps of requesting from an external DNS, a newly fetched numeric address for said domain name when a next request for said domain name will be received, restoring said newly fetched numeric

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address as the attribute data for said domain name in said list and refreshing said expiry date and time.

23. (new) The device according to Claim 1, wherein the order includes consulting the list of host names before the list of domain names.

24. (new) A method as claimed in Claim 13, wherein the order includes consulting the list of host names before the list of domain names.